FUU MAIL SECTION

allow Automated Maritime Telecommunications System (AMTS) coast stations to share this band on a secondary 22 PH 195 asis for point-to-point network control communications.

Before the Federal Communications Commission Washington, D.C. 20554

DISPATCHED BY

WT Docket No. 95-56

In the Matter of

Amendment of the Commission's Rules Concerning Low Power Radio and Automated Maritime Telecommunications System Operations in the 216-217 MHz Band

RM-7784

NOTICE OF PROPOSED RULE MAKING

Adopted: April 25, 1995;

Released: May 16, 1995

Comment Date: July 18, 1995

Reply Comment Date: August 17, 1995

By the Commission:

I. INTRODUCTION

1. This Notice of Proposed Rule Making (Notice) continues our effort to provide adaptive, flexible regulations for spectrally efficient use of the 216-217 MHz band, as initiated in the Notice of Proposed Rule Making and Notice of Inquiry (NOI), released November 30, 1992. By this Notice, we are proposing rules to permit the shared use of the 216-217 MHz band, on a secondary, non-interference basis, for a new Low Power Radio Service to include law enforcement tracking systems, auditory assistance devices for the hearing-impaired, and health care assistance devices for disabled and ill persons. Further, we are also proposing to

II. DISCUSSION

2. In 1992, the Commission reallocated one megahertz of radio spectrum from the AMTS to the Interactive Video and Data Service (IVDS).2 This action effectively "orphaned" the 216-217 MHz band by taking away one side of the channel pair from AMTS Groups C and D.3 In the NOI, we requested suggestions for new uses of this band noting that any proposed uses must not cause harmful interference to Television (TV) Channel 13. Commenters proposed several uses for the 216-217 MHz band. Phonic Ear, Inc. (Phonic Ear) advocates using this one megahertz of spectrum for auditory assistance devices for persons with hearing disabilities and health care aids for ill persons.5 PRONET, Inc. (PRONET) requests six channels in the 216-217 MHz band for electronic tracking systems, to enable law enforcement authorities to trace stolen goods by means of signals put out by miniature transmitters attached to the goods. Finally, Waterway Communications Systems, Inc. (WATERCOM), an AMTS licensee, and American Commercial Barge Lines (ACBL) advocate permitting AMTS point-to-point, fixed communications for network control of AMTS stations. Similarly, SEA, Inc. (SEA) proposes, in general, that the band be used for simplex data transmissions in the AMTS.8

3. Phonic Ear Petition. According to Phonic Ear, an auditory assistance system consists of a very low power, short range transmitter and special receivers that allow persons with hearing disabilities to enjoy educational or entertaining audio presentations. These devices use a single frequency to transmit an audio signal one-way at very low power. Phonic Ear claims, however, that auditory assistance devices currently operating in the 72-76 MHz band are subject to interference from co-channel high-power operations, such as wide-area paging systems. Additionally, Phonic Ear argues that permitting auditory assistance operations in the 216-217 MHz band will further the goals of the Americans with Disabilities Act of 1990 by allowing operators of privately owned facilities, e.g. theaters, stadiums, and lecture halls, to accommodate hearing impaired customers,9 and will allow manufactures to reduce the size

PR Docket No. 92-257, 7 FCC Rcd 7863 (1992).

See Report and Order in GEN Docket No. 91-2, 7 FCC Rcd 1630 (1992). See also Memorandum Opinion and Order in GEN Docket No. 88-372, 7 FCC Rcd 3607 (1992).

The AMTS was initially allocated 80 duplex channel pairs divided into four 20-channel groups, designated as Groups A, B, C, and D. Frequencies allotted for the ship transmit side of the channel pair in Groups C and D were reallocated to IVDS in GEN Docket No. 91-2. The remaining half of the pair in Groups C and D, 216-217 MHz, is currently not being used.

Comments were received from Phonic Ear, Inc. (Phonic Ear), PRONET, Inc. (PRONET), and SEA Inc. (SEA). Joint comments were filed by Waterway Communications Systems, Inc. (WATERCOM) and American Commercial Barge Lines (ACBL).

See Phonic Ear, Petition for Rule Making, June 2, 1993, (Phonic Ear Petition) at i.

See PRONET, Inc., Request to Modify Petition for Rule Making, RM-7784 (1993). PRONET has operated electronic tracking systems (ETS) under an experimental license since 1972. In a Petition for Rule Making, RM-7784, PRONET asked

for a permanent allocation of three frequencies in the 218-219 MHz band for ETS. After the Commission allocated 218-219 MHz to the Interactive Video Data Service in the Report and Order in GEN Docket No. 91-2, 7 FCC Rcd 1630 (1992), PRONET amended its petition to request six channels in the 216-217 MHz band. For this reason, PRONET's modified petition will be considered in this proceeding. Additionally, PRONET submitted a pioneer's preference request associated with RM-7784, PP-23. Consistent with our review of the pioneer's preference rules in ET Docket No. 93-266, we will not address the merits of PRONET's request at this time. See FCC Rcd 7692 at ¶ 21 (1993).

See WATERCOM comments at 8-9.

See SEA comments at 11. Because SEA generally supports the use of the band by AMTS stations and no specific proposals were mentioned, we will not discuss SEA's comments as a separate issue herein.

See the Americans with Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 327 (1990) whose purpose, inter alia, is to provide a comprehensive national mandate for the elimination of discrimination against individuals with disabilities. See also

and weight of such devices, resulting in functional as well as aesthetic benefits. ¹⁰ Further, Phonic Ear promotes the use of this band for medical telemetry devices and other low power health care aids and claims that each of the low power services described above will not cause harmful interference to TV Channel 13. ¹¹

- 4. PRONET Petition. Under the law enforcement tracking system (LETS) proposed by PRONET, extremely small radio transmitters are attached to money and goods that are likely to be stolen. When a theft occurs, the device is activated and begins transmitting a radio signal. Radio direction finding equipment may then be used to quickly locate the stolen property. In its petition, PRONET argues that LETS will increase public safety by providing state and local law enforcement agencies with the tools to quickly apprehend criminals, thereby deterring crime. Further, PRONET claims that LETS will not cause harmful interference to TV Channel 13 reception so long as the transmitters remain at least three feet from TV sets.
- 5. WATERCOM Comments. AMTS stations provide automated, integrated, interconnected ship-to-shore communications similar to a cellular phone system for tugs, barges, and other marine vessels. In establishing the rules permitting AMTS stations, the Commission was concerned with the potential for interference to TV reception, particularly TV Channel 13 because of the proximity of AMTS channels and, therefore, conditioned the operation of AMTS coast stations on the requirement that no harmful interference be caused to TV reception.14 WATERCOM and ACBL claim that point-to-point simplex use of frequencies in the 216-217 MHz band could provide network control of AMTS stations without affecting TV reception. Further, WATERCOM and ACBL suggest that the use of dedicated frequencies for controlling AMTS coast stations could increase overall system efficiency, making better quality services available to mariners. 15
- 6. Based on the information provided by the commenters, we believe that the public interest would be served by permitting the low power and point-to-point operations as described above by Phonic Ear, PRONET, and WATERCOM. Further, the proposed low power and point-to-point services appear to meet the Commission's primary requirement for operation in the 216-217 MHz band -- they would not cause harmful interference to TV Channel 13 operations. For example, low power auditory assistance devices and health care aids would generally operate in areas far removed from TV receivers. Similarly, low power LETS would operate intermittently, for short periods, far from TV receivers. Also, AMTS point-to-point links could be carefully designed to avoid residential areas.
- 7. New Services. In light of the substantial public benefits of these proposals, we propose to authorize shared use of the 216-217 MHz band on a secondary, non-interference basis for a new Low Power Radio Service and AMTS point-to-point operations. The proposed Low Power Radio Service would include the operation of auditory assistance

devices, LETS, and radio based health care aids, while AMTS point-to-point operations would provide network control communications for AMTS coast stations. All such proposed operations, however, would be on a secondary, non-interference basis. This means that the proposed low power and AMTS services must not cause harmful interference to TV receivers within the Grade B contour¹⁶ of any TV Channel 13 station.

- 8. Technical Parameters. There are forty, 25 kHz channels available in the 216-217 MHz band. Based on the comments and the necessity to minimize interference to TV Channel 13, we propose to allocate 30 channels (216.0125-216.7375 MHz) for a new Low Power Radio Service and 10 channels (216.7625-216.9875 MHz) for AMTS point-to-point communications. Of the 30 channels designated for low power operations, the 20 channels nearest to TV Channel 13 would be limited to 100 milliwatts transmitter output power with two of the channels (216.4625 MHz and 216.4875 MHz) set aside specifically for LETS. The remaining 10 channels would be limited to one watt transmitter output power. The low power channels, except for the two LETS channels, would be administered under a new Low Power Radio Service to be included in Subpart G of Part 95 of the Commission's Rules, 47 C.F.R. Part 95. We propose to administer the two dedicated LETS channels (216.4625 and 216.4875 MHz) under the Police Radio Service in Part 90 of the Commission's Rules, 47 C.F.R. Part 90.17 Finally, we propose to administer the 10 AMTS channels under the provisions of Part 80 of the Commission's Rules.
- 9. Licensing. Under this proposal, authorizations in the Low Power Radio Service, including the two LETS channels administered under Part 90, would be granted based on Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs), 18 while each AMTS licensee would be authorized under its coast station license. Applicants would apply for authorization in the Low Power Radio Service using FCC Form 600. AMTS licensees would obtain authorization using FCC Form 503. Because all low power licensees would be sharing the 216-217 MHz band on a secondary, non-interference basis, we do not propose to place a limit on the number of authorizations per MSA and RSA or the total number of licenses a single entity may obtain. We seek specific comment on our proposed licensing scheme.

III. CONCLUSION

10. In summary, we propose to create a new Low Power Radio Service by authorizing the use of 30 channels in the 216-217 MHz band for short range, one-way auditory assistance, health care, and law enforcement tracking communications. Further, we propose to permit AMTS point-to-point communications on 10 channels in the band. Providing channels for auditory assistance and health care devices would further the goals of the Americans with

Phonic Ear Petition at 2.

By changing operating frequencies from the 72-76 MHz band to the 216-217 MHz band, manufacturers may utilize an internal antenna, rather than a cord based antenna, therefore improving the appearance of the equipment. See Phonic Ear Petition at 16.

See Phonic Ear Petition at 4 and 14-16.

¹² See PRONET petition at 8-9.

¹³ See PRONET petition at 4 and 21-22.

⁴ See 47 C.F.R. § 80.215(h).

¹⁵ See WATERCOM and ACBL at 8-9.

The Grade B contour of a TV Channel 13 station is defined in Section 73.683 of the Commission's Rules, 47 C.F.R. § 73.683

See, e.g., 47 C.F.R. § 90.19.
 See 47 C.F.R. § 22.903 and FCC Public Notice, Report No. 92-40, January 24, 1992.

Disabilities Act of 1990, improve educational opportunities for persons with disabilities, and facilitate health care services. Providing channels for tracking systems for stolen goods and money would benefit law enforcement agencies and the public by reducing crime. Finally, providing channels for AMTS network control will promote more efficient operations in the AMTS service, increasing marine access to state of the art communications services. Each of these proposals increases spectrum efficiency by making currently unused spectrum available to meet the needs of disabled and ill persons, law enforcement agencies, as well as mariners. We seek specific comments on the proposed rules set forth in Appendix B, and the following questions.

- a) Instead of designating 30 channels for low power use, what are the advantages and disadvantages of permitting non-channelized emissions within the 216.0125 216.7375 MHz band? What limitations are necessary in order to permit such operation?
- b) Should the proposed scope of eligibility and/or uses of the Low Power Radio Service be broadened or narrowed?
- c) What are the advantages and disadvantages of permitting eligibles in the AMTS service and eligibles in the new Low Power Radio Service (Part 95 channels only) to share each others' 216-217 MHz band channels on a secondary, non-interference basis?
- d) Are the proposed technical requirements for Low Power Radio Service and AMTS operations (e.g. power and emission limitations) consistent with protecting adjacent TV Channel 13? Should any of the proposed technical requirements be revised, added, or removed?

IV. PROCEDURAL MATTERS

INITIAL REGULATORY FLEXIBILITY ANALYSIS

- 11. An Initial Regulatory Flexibility Analysis is contained in Appendix A to this *Notice*.
- 12. Accordingly, we adopt this Notice under the authority contained in Sections 4(i) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i) and 303(r). Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. Sections 1.415 and 1.419, interested persons may file comments on or before July 18, 1995 and may file reply comments on or before August 17, 1995. To file formally in this proceeding, you must file an original and four copies of all comments, reply comments, and supporting comments. If you want each Commissioner to receive a personal copy of your comments, you should file an original and nine copies. You should send your comments and reply comments to Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the

Reference Center (Room 239) of the Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554.

- 13. This is a non-restricted notice and comment rule making proceeding. Ex parte presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in Commission rules. See generally 47 C.F.R. §§ 1.1202, 1.1203, and 1.206(a).
- 14. For further information, contact Roger Noel, Wireless Telecommunications Bureau, Federal Communications Commission, 2025 M Street, NW, mail stop 1700C2, Washington, DC 20554; telephone (202) 418-0680.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton

Acting Secretary

APPENDIX A

INITIAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the proposals contained in this Notice. We request written public comment on the IRFA, which follows. Comments must have a separate and distinct heading designating them as responses to the IRFA and must be filed by the deadlines provided in paragraph 12, supra. The Secretary shall send a copy of this Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603 (a) of the Regulatory Flexibility Act. Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. §§ 601-612 (1981).

A. Reason for Action

2. The Commission proposes to allow low power devices to share Automated Maritime Traffic System frequencies in the 216-217 MHz band.

B. Objectives

3. We seek to make better use of currently unused portions of the spectrum while taking advantage of alternative low power technologies.

C. Legal Basis

4. The proposed action is authorized under Sections 4(i) and 303(r) of the Communications Act, 47 U.S.C. §§ 154(i) and 303(r).

systems, Report and Order, GEN. Docket No. 88-566, 4 FCC Rcd. 7558, 7561 (1989).

¹⁹ This is similar to the authorization of stolen vehicle recovery systems. See In the Matter of Amendment of Parts 2 and 90 of the Commission's Rules to provide for stolen vehicle recovery

- D. Reporting, Recordkeeping and Other Compliance Requirements
- 5. Our proposed addition of 47 C.F.R. § 95.1031 would require the low power transmitters to be type accepted by the Commission.
- E. Federal Rules Which Overlap, Duplicate or Conflict with These Rules
 - 6. None.
- F. Description, Potential Impact, and Small Entities Involved
- 7. Allowing low power devices to be licensed in the 216-217 MHz band would use the radio spectrum more efficiently, assist law enforcement organizations, and facilitate implementation of the provisions of the Americans with Disabilities Act of 1990.
- G. Any Significant Alternatives Minimizing the Impact on Small Entities Consistent with the Stated Objectives
 - 8. None.

APPENDIX B

PROPOSED RULES

Chapter I of Title 47 of the Code of Federal Regulations, Parts 80, 90, and 95 are proposed to be amended as follows:

Part 80 - Stations in the Maritime Services

1. The authority citation for Part 80 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, unless otherwise noted. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609; 3 UST 3450, 3 UST 4726, 12 UST 2377.

2. Section 80.385 is amended by revising the first sentence of paragraph (a)(2), inserting a new sentence after the first sentence of paragraph (a)(2), revising footnote 2, and removing the entries 216.0125 through 216.7375 and adding in their place a new footnote 3 to read as follows:

§ 80.385 Frequencies for automated systems.

- (a) * * *
- (2) The carrier frequency pairs listed for channels 141 through 180 for Group A and B are available for radiotelephony, facsimile and teleprinter communications. The carrier frequencies listed for channels 131 through 140 for Group C are available for point-to-point network control of AMTS coast stations. * * *

channel No.	Carrier Frequency (MHz)		
	Ship tr ansmit ¹	Coast transmit ²	Group
101		3	D
102		3	
103		3	
104		3	
105		3	
106		3	
107		3	
108		3	·
109		3	
110		3	
110		3	
111		3	
112		3	
113		3	
114		3	

	· · · · · · · · · · · · · · · · · · ·		
115		3	
116		3	
117		3	
118		3	
119		3	
120	•••••	3	
121	•••••	3	C
122		3	
123	•••••	3	
124		3	
125		3	
126		3	
127		3	
128		3	
129		3	
130	•••••	3	
* * *			

¹ Ship transmit frequenices in Group C and D are not authorized for AMTS use.

³ Not currently assignable.

² The coast transmit frequencies corresponding to channels 131 through 140 for Group C are available for point-to-point network control communications by AMTS coast stations.

3. Section 80.477 is amended by adding a new paragraph (d) to read as follows:

§ 80.477 AMTS Points of communications.

* * * * *

(d) AMTS licensees may provide point-to-point, network control of AMTS coast stations on the frequencies provided in § 80.385.

Part 90 - Private Land Mobile Radio Services

1. The authority citation for Part 90 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303 and 332, unless otherwise noted.

2. Section 90.19 is amended by adding two new entries in numerical order to the table in paragraph (d), and adding new paragraphs (e)(32) and (f)(8) to read as follows:

§ 90.19 Police Radio Service.

* * * * *

(d) * * *

Police Radio Service Frequency Table

Frequency or band	Class of station(s)	Limitations
* * * *		
216.4625	Mobile	32
216.4875	Mobile	32
* * * * *		

(e) * * *

(32) This frequency is available for law enforcement tracking systems in accordance with § 90.19(f)(8).

(f) * * *

(8) The frequencies 216.4625 MHz and 216.4875 MHz are available for law enforcement tracking systems (LETS) and may only be used for tracking stolen goods. Licensing of LETS under this Part is primarily limited to eligibles in the Police Radio Service. Assignments may also be made to entities who provide LETS service to eligibles in the Police Radio Service. Applications from persons or organizations other than governmental entities must be accompanied by a statement from a governmental entity having legal jurisdiction in the area to be served, supporting the request. Stations operating on these frequencies are limited to 100 milliwatts transmitter power output. Only PON, P2D, A0N, or A2D emissions are permitted within the maximum authorized channel bandwidth of 20 kHz.

Part 95 - Personal Radio Services

1. The authority citation for Part 95 continues to read as follows:

Authority: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303.

2. A new Subpart G is added to read as follows:

Subpart G Low Power Radio Service (LPRS).

GENERAL PROVISIONS

§ 95.1001 Basis and purpose.

§ 95.1003 Service areas.

§ 95.1005 License requirements.

§ 95.1007 Eligibility.

§ 95.1009 Applying for a new or modified license.

§ 95.1011 Application for a renewed license.

SYSTEM REQUIREMENTS

§ 95.1021 Station identification.

§ 95.1023 Station inspection.

§ 95.1025 Permissible communications.

TECHNICAL STANDARDS

§ 95.1031 Type acceptance.

§ 95.1033 Channels available.

§ 95.1035 Channel use policy.

§ 95.1037 Transmitter power.

§ 95.1039 Antenna height.

§ 95.1041 Emission types.

§ 95.1043 Emission standards.

Subpart G Low Power Radio Service (LPRS).

GENERAL PROVISIONS

§ 95.1001 Basis and purpose.

The rules in this subpart are intended to provide a short range, one-way communication service to assist in providing auditory assistance services to persons with disabilities and to assist in providing health care services to the ill. The frequencies may also be used to assist in recovering stolen goods.

§ 95.1003 Service areas.

Each LPRS system service area is one of the cellular system service areas as defined in 47 C.F.R. § 22.903 and FCC Public Notice, Report No. 92-40, January 24, 1992.

§ 95.1005 License requirements.

- (a) Each LPRS system must be licensed in each service area in which it operates.
- (b) The stations transmitting in the LPRS system service area are authorized under the system license when the antenna does not exceed 6.1 meters (20 feet) above the ground or existing man-made structure, other than an antenna structure.
 - (c) The term of each LPRS system license is five years.

§ 95.1007 Eligibility.

An entity is eligible to hold an LPRS system license if it is:

- (a) Engaged in the operation of auditory assistance devices for persons with disabilities;
- (b) Engaged in the operation of a hospital, clinic, or other medical facility regularly providing medical services;
- (c) Engaged in the operation of an educational, philanthropic, or ecclesiastical activity;
 - (d) A state or local government entity; or,
- (e) Engaged in the operation of a commercial activity providing support for law enforcement (such entities must have an agreement with the law enforcement agency responsible for the area served).

§ 95.1009 Applying for a new or modified license.

- (a) An eligible entity applies for a new LPRS system license or to modify an existing LPRS system license by filing with the FCC properly completed FCC Form 600 with all required additional information attached. The form must be sent to: Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA 17325-7245.
- (b) The application form must be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; or by an officer or duly authorized employee, if the applicant is a corporation.
- (c) Any application not complying with the FCC's Rules may be dismissed.

§ 95.1011 Application for a renewed license.

Each application for a renewal of an LPRS system license must be submitted on FCC Form 600 or Form 405-A. The application form must be sent to: Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA 17325-245.

SYSTEM REQUIREMENTS

§ 95.1021 Station identification.

An LPRS station is not required to transmit a station identification announcement.

§ 95.1023 Station inspection.

Upon request by an authorized FCC representative, the LPRS system licensee must make all station apparatus available for inspection.

§ 95.1025 Permissible communications.

All communications must be one-way transmissions that:

- (a) Provide auditory assistance services to persons with disabilities;
 - (b) Assist in providing health care services to the ill; or
- (c) Provide stolen goods recovery services to law enforcement agencies.

TECHNICAL STANDARDS

§ 95.1031 Type acceptance.

Each transmitter used in a LPRS system must be typeaccepted for use in accordance with Subpart J of Part 2 of this Chapter and included in the Commission's current Radio Equipment List.

§ 95.1033 Channels available.

- (a) The following channels are authorized to stations in the LPRS which provide auditory assistance, health care, or stolen goods recover service communications:
- (b) Group 1. The maximum transmitter output power is 100 milliwatts for stations transmitting on a channel in Group 1.

C. Oup 1.	C (((() () () ()
Channel No.	Center frequency (MHz)
1	216.0125
2	216.0375
3	216.0625
4	216.0875
5	216.1125
6	216.1375
7	216.1625
8	216.1875
9	216.2125
10	216.2375
11	216.2625
12	216.2875
13	216.3125
14	216.3375
15	216,3625
16	216,3875
17	216.4125
18	216.4375

(c) Group 2. The maximum transmitter output power is 1 watt for a stations transmitting on a channel in Group 2.

Channel No.	Center frequency (MHz)
21	216.5125
22	216.5375
23	216.5625
24	216.5875
25	216.6125
26	216.6375
27	216.6625
28	216.6875
29	216.7125
30	216.7375

(d) Each LPRS transmitter must be maintained within a frequency stability of 50 parts in 106.

§ 95.1035 Channel use policy.

- (a) The channels authorized to LPRS systems by this Part of the FCC Rules are available on a shared basis only and will not be assigned for the exclusive use of any licensee.
- (b) Licensees must cooperate in the selection and use of channels in order to reduce interference and make the most effective use of the authorized facilities. Licensees of systems causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If licensees are unable to do so, the FCC may impose restrictions including, but not limited to, specifying power, antenna height, or area or hours of operation of the stations concerned.

(c) Operation is subject to the condition that no harmful interference is caused to the reception of television stations operating on TV channel 13.

§ 95.1037 Transmitter power.

The transmitter power of each station in a LPRS system shall be limited to the minimum necessary for satisfactory communications, and must not exceed the maximum power specified for the channel group.

§ 95.1039 Antenna height.

No antenna at a station in an LPRS system shall exceed 6.1 meters (20 feet) above ground or existing manmade structure. If mounted on an existing structure, the tip of the antenna shall not exceed 30.5 meters (100 feet) above ground. In cases where interference occurs the FCC may require the licensee to reduce the height of the antenna.

§ 95.1041 Emission types.

An LPRS station may transmit any emission type appropriate for one-way communications in this service.

§ 95.1043 Emission standards.

The standard channel bandwidth is 25 kHz. A LPRS system, however, may subdivide channels and/or may combine two or more adjacent channels. Except for those described in paragraph (c) of this section, emissions shall be attenuated below the unmodulated carrier in accordance with the following:

- (a) Emissions 12.5 kHz to 22.5 kHz away from the channel center frequency: at least 30 dB;
- (b) Emissions more than 22.5 kHz away from the channel center frequency: at least 43 + 10log(carrier power in watts) dB.
- (c) In cases where multiple adjacent channels are combined for the use of a single LPRS system, the following shall apply:
- (i) Emissions 12.5 kHz to 22.5 kHz below the center frequency of the lowest numbered channel in the block: at least 30 dB;
- (ii) Emissions 12.5 kHz to 22.5 kHz above the center frequency of the highest numbered channel in the block: at least 30 dB;
- (iii) Emissions more than 22.5 kHz below the center frequency of the lowest numbered channel in the block: at least 43 + 10log(carrier power in watts) dB;
- (iv) Emissions more than 22.5 kHz above the center frequency of the highest numbered channel in the block: at least 43 + 10log (carrier power in watts) dB;